

Risk Population Management Platform (PGPR)

ATTENTION AND PREVENTION STRATEGY

PRIMARY PREVENTION FOR VULNERABLE
POPULATION IN SITUATIONS OF EMERGENCIES
LIKE COVID 19 OR ANY OTHER
CATASTROPHES



NATURAL DESASTRES FIRES, STUMANI, HEAT WAVES...

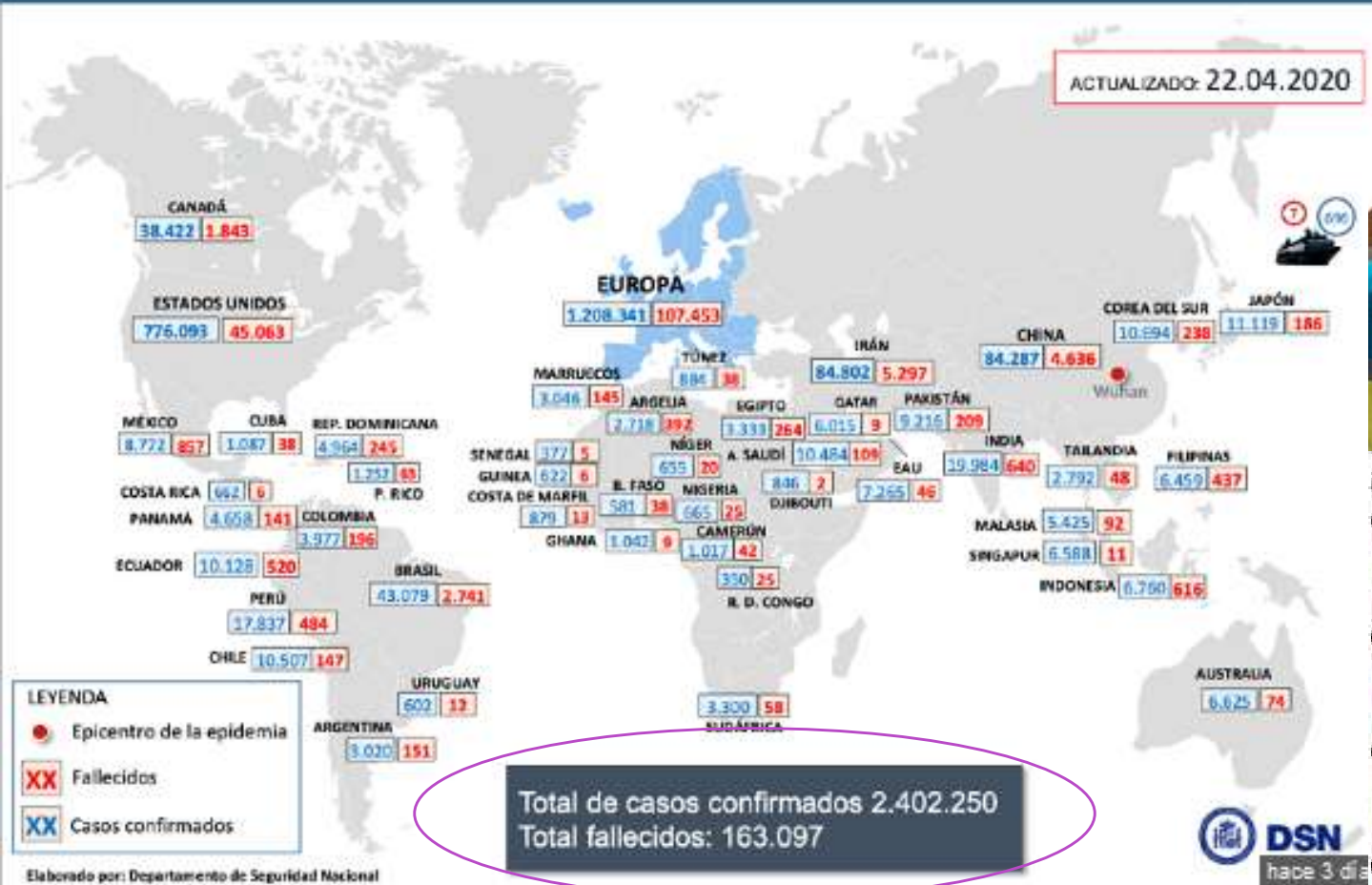


Portugal: at least 31 people died in their worst day



PRINCIPALES CASOS CONFIRMADOS DE COVID-19 FUERA DE EUROPA

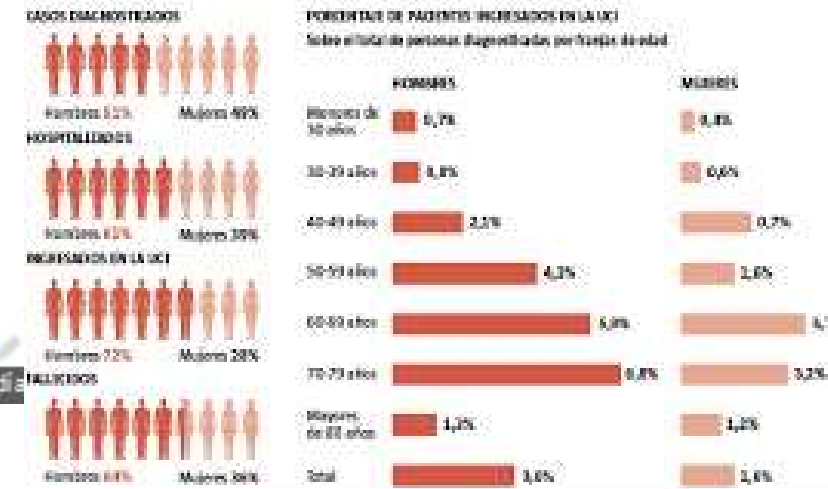
ACTUALIZADO: 22.04.2020



GLOBAL HEALTH CATASTROPHE



Los hombres, más vulnerables frente al Covid-19



WORLDWIDE PANDEMIC

Problem

- ✓ Countries' **discoordination, lack of collaboration** and **consensus**.
- ✓ Reactions and solutions based on political situation of each country instead of based on medical common criteria. **Lives of citizens and economic future of each country should not depend on political colours.**
- ✓ **Lack of common European criteria, intervention protocols and rules/policies** in the sanitary field.
- ✓ **High impact on lives, economies** and personal individual situation of each citizens.
- ✓ Increase of **poverty gap, gender equality gap**.
- ✓ **Lack of centralization of medical records** across Europe and also in each individual country.
- ✓ Fully demonstrated the **vulnerability of the different health systems**.

Solution and advantages

NOW has come the time to **cooperate, share resources, experiences and learnings from everyone.**

For Governments & Institutions

- ✓ Costs reduction
- ✓ More proactiveness
- ✓ Better crisis management
- ✓ Better resource allocation

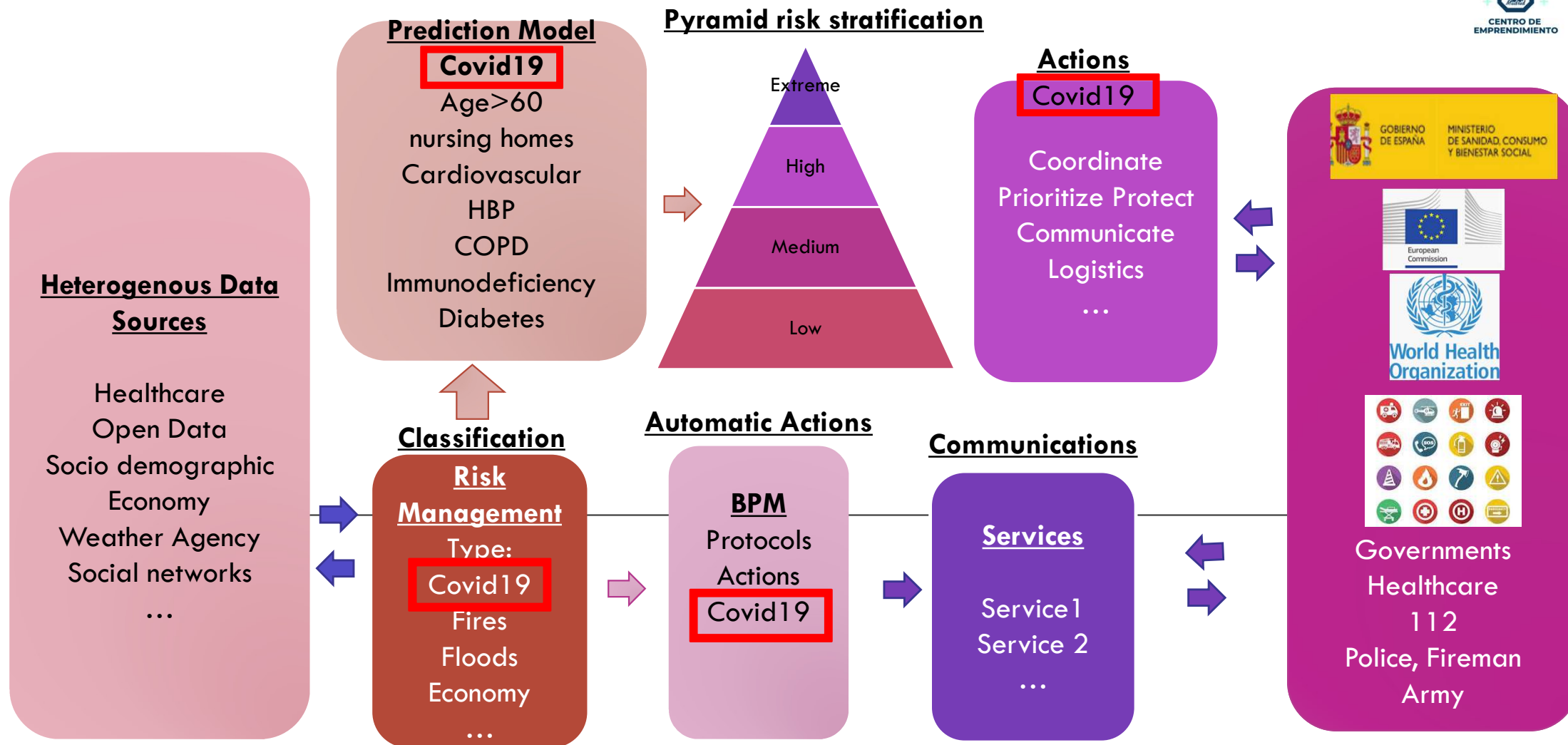
For the health care system

- ✓ Mortality rate reduction
- ✓ Personalised patients care
- ✓ Hospitals less collapsed
- ✓ Predictions of hospital saturations and future needs of resources

For the society and its citizens

- ✓ Improved attention of the patients and citizens with personalized treatments
- ✓ Less deaths and grief for lost lives
- ✓ Availability of resources and less poverty

Population risk stratification and intervention protocols



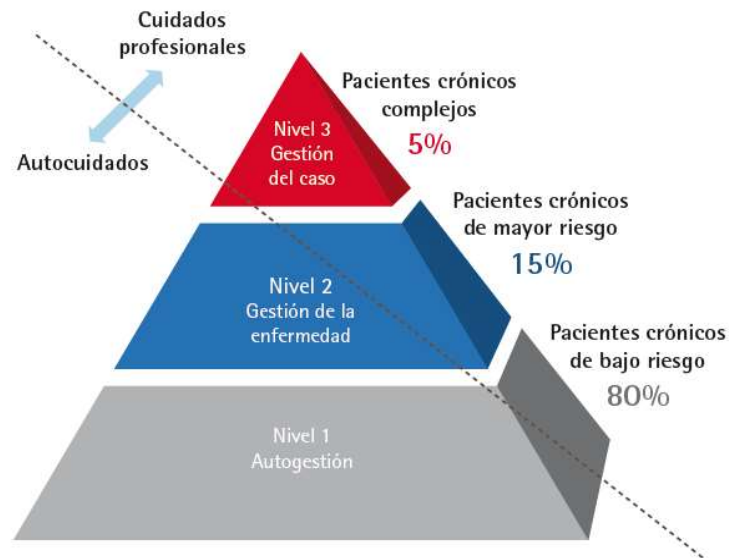
#EUvsVirus

PGPVG Project

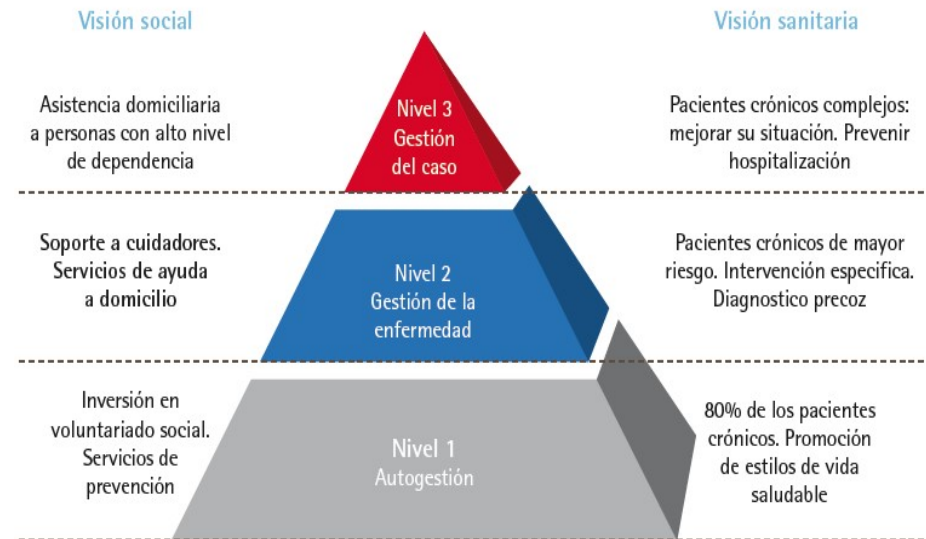
1st challenge:
Integrated solution
as Support on Crisis
Situation
considering:

Care Strategy for Patients
with Chronic Diseases in
the Community of Madrid

The Kaiser population model for the provision of services at the most cost-effective level of care to improve population health.



The King's Fund recently examined in a recent report, people's trends in spending on social services for elderly persons



Put the platform at the service of institutions which work with risk patients:
First level of care, Socio-health care, Dependency care

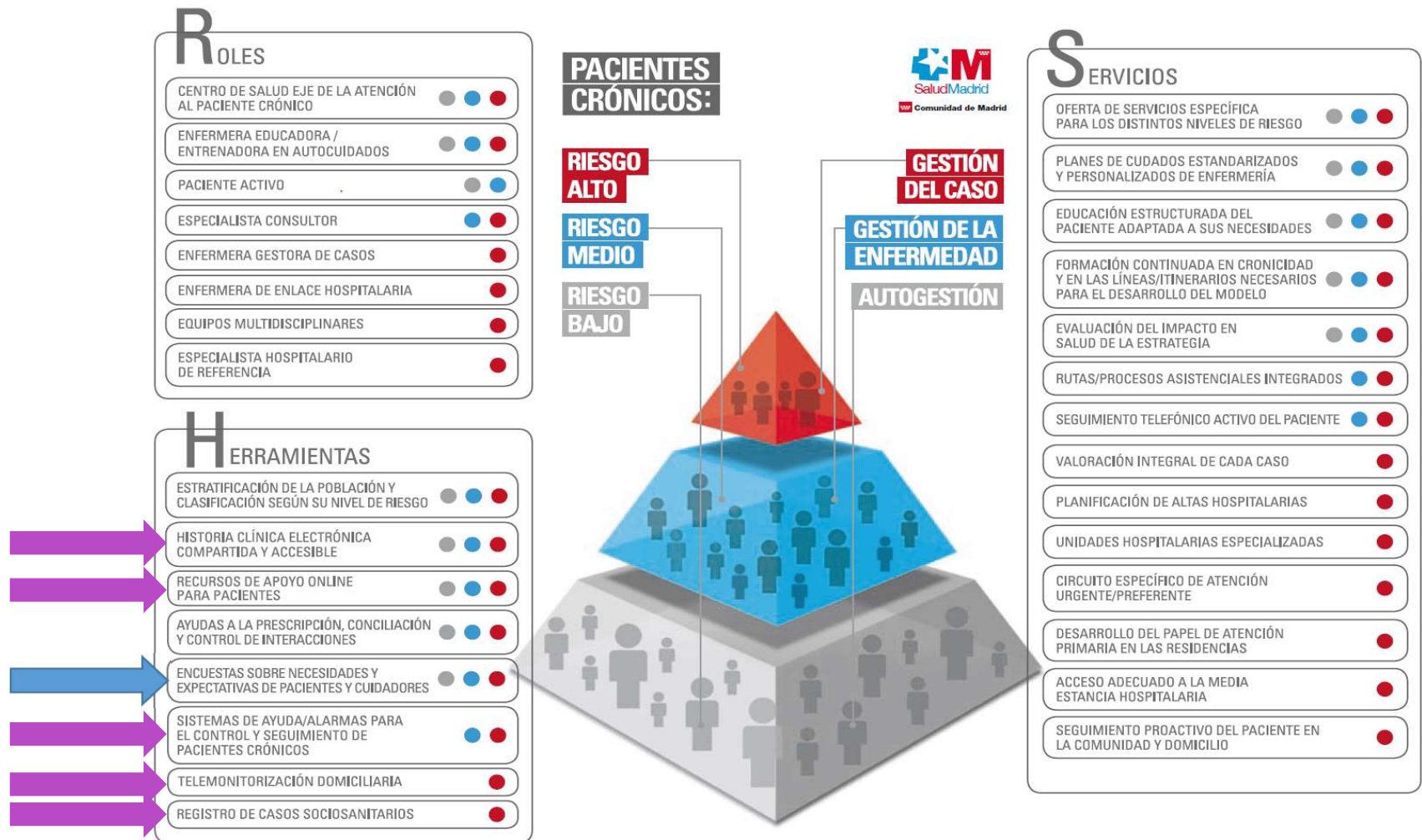
#EUvsVirus

PGPVG Project

2st challenge:

Integrated solution
as Support on Crisis
Situation
considering:

Madrid Community
existing tools and specific
requirements to follow up
the risks patients



The proposed platform must respond to the requirements that CAM tools need for monitoring risk patients

Risk Population Management Platform (PGPR)

Heterogeneous Data Sources

(Healthcare, Open Data,...)

RDB
NoSQL
RDF
CSV,...

Big Data Platform

Semantic Knowledge Layer



Data Collection

Real Time
Import Data
SQL Query

Data Curation

Normalization
Cleaning
Storage

Analytics

Machine
Learning
Analytics

Data Storage Layer



Consumers

Service 1
Service 2
...

Visualization

Dashboard
Graphs
D3.js

End user



Government
Healthcare
Services

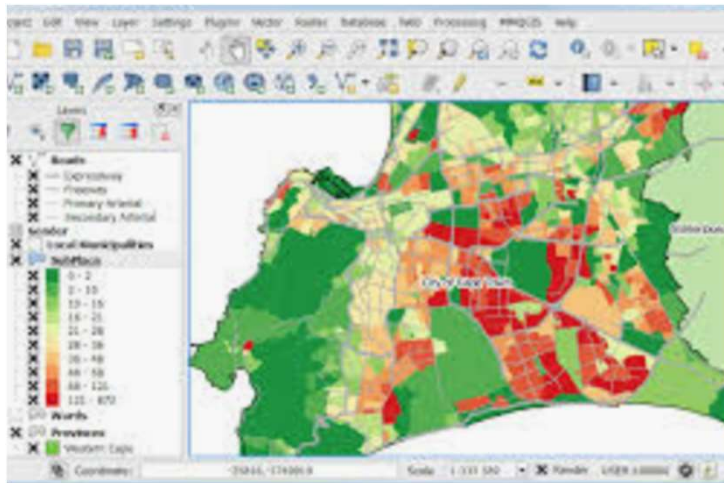


Risk Population Management Platform (PGPR)

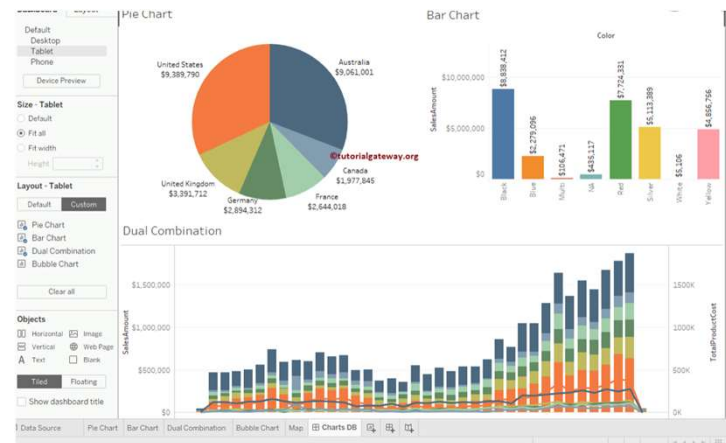
Data Visualization



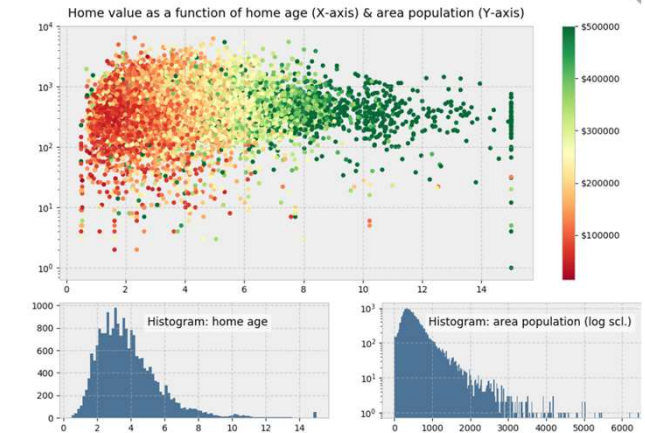
Geo Analytics (GIS)



Dashboard



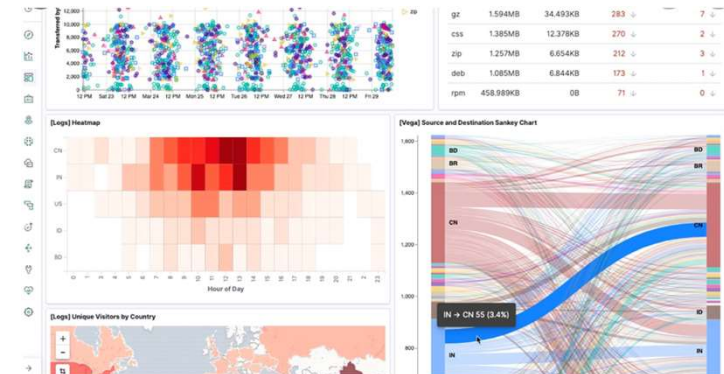
Data Scientist



Graphs



Real Time Analysis



#EUvsVirus

PGPVG Project

MVP



Services => Society Resources



Control Panel



IoS
(Final Users:
Risk Population)



Big Data
Machine Learning / AI

Scaled/Synchronized Integration



1s level
Regional Community
(MVP Validation in Madrid
for Covid19)



2nd level
State Comm.
(MVP Validation in Spain)



3rd level
European Comm.
(MVP Validation in EU)

From data processing on the platform on 1st wave in Covid19, prevent service coordination for the foreseen 2nd and 3rd waves after lockdown policy

- Theoretical pattern: Simulated education under different scenarios & hypothesis
- Control panel: Disclosed info and monitored machine learning results to be applied on protocols: % reduction on pandemic effect evolution (deaths, infections, overloading services, resources, reaction time, PIB, unemployment...)

KPI

#infected/Xi,Yi,Zi, Ki date
#dead/Xi,Yi,Zi,Ki date
#recovered/Xi,Yi, Zi ,Ki date

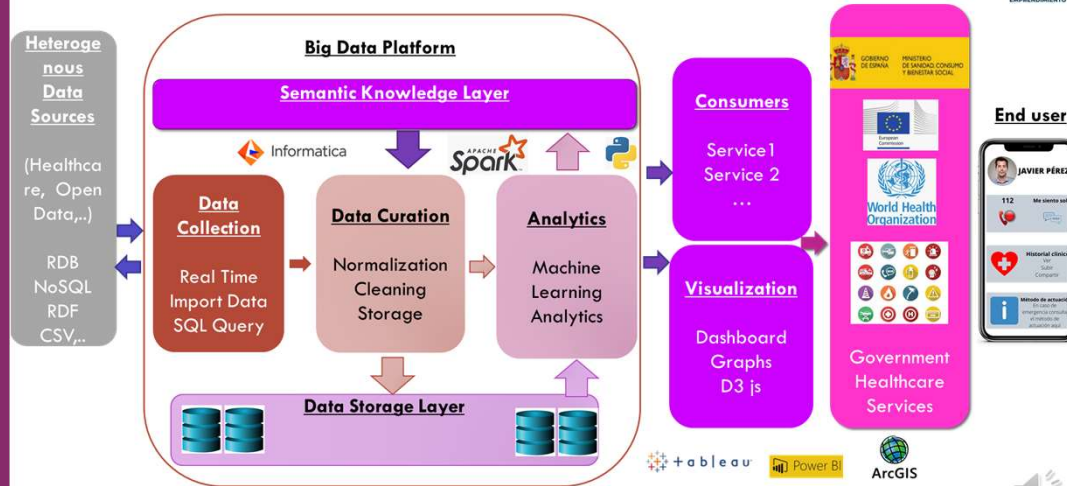
Xi=risk pop
Yi=protocol
Zi=level of service integration
Ki=resources employed per service

#EUvsVirus

PGPVG Project

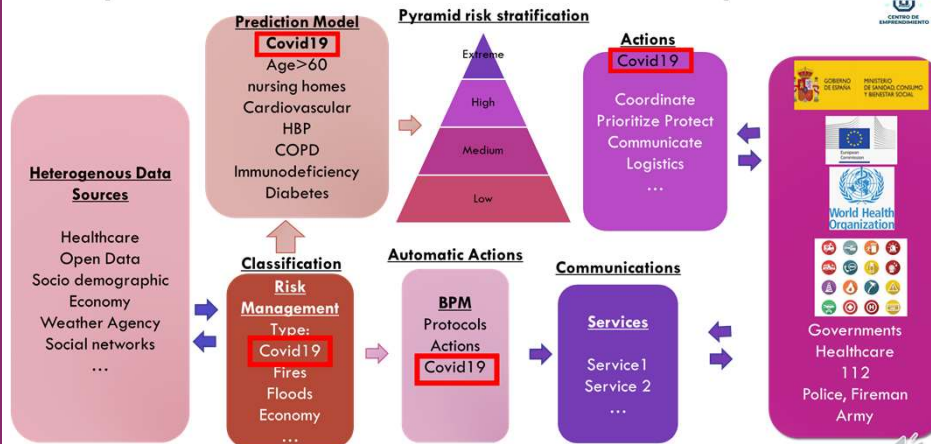
Product Description

Risk Population Management Platform (PGPR)



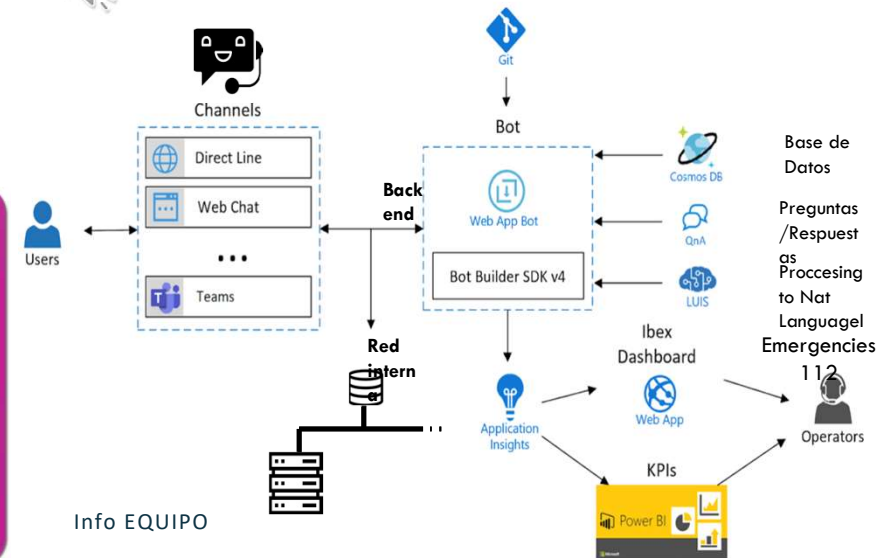
Predictive Design

Population risk stratification and intervention protocols



Technology

Platform Architecture



#EUvsVirus

PGPVG Project

Business Model Canvas

1. VALUE PROPOSITION:

Platform structured as a Big Data predictive system who learn data, detect crisis and coordinate services to healthcare risk population. Allows diminish effect of large pandemics or global crisis taken into account risk factors through to machine learning protocols and synchronization + integration of the existing social resources. This proposal is potentially scalable, flexible enough and design layered to be extended at total EU territory under a common European policy on situations like pandemic or natural disasters.

Strongly **FEASIBLE**:

- 2. Strategical alliances w/ BigData-SW suppliers & academical institutions.
- 3. Permanent contact w/ local society resources.
- 4. Participation on periodical simulacrams & data updating

Highly **DESIRABLE**:

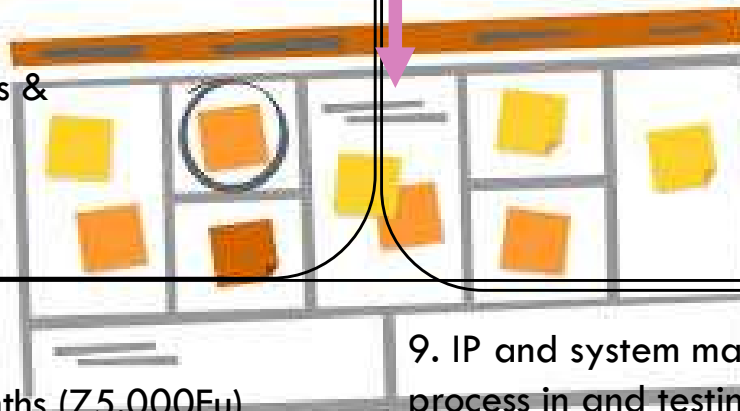
- 5. B2B oriented to local public administrations to protect global risk population. Potential demand is tot population of a region, depending on the user segment to be processed and considered.

- 6. EU commission and regional authorities progs for SME/STUP
- 7. Promote trial testing and research outreach

Safety **VIABLE**:

- 8. MVP ready in 3 months (75.000Eu)
First layered integration in other 3 months from validation date (150.000Eu)

- 9. IP and system maintenance, research and data process in and testing; first 18 months from a dedicated spin-off (25.000Eu): university-public/private institution



#EUvsVirus

PGPVG Project

Start Up



Initial Investment:

- FFF 3.000 Eu
- University 3.000Eu
- BA/Pub.Priv.Institutions 19K Eu
- Request funds: 25K Eu

Timing:



Validated
MVP

1st sale
75K
Regional
Area

3

6

Sales: 225K-350K
State Area per
Regions
Local/National
Consortium

1

2

Sales: 500K-750K
EU Area
European
Consortium

18

months

Society:

- IT(AI&BD) + HealthTech
- Spin-off (6-12 months, 75K Eu)
- Start Up (12-18 months / 2 investment rounds: 100K & 1MEu)



Help us to get
ready for next
waves and
future
catastrophes!

